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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,084	12/03/2003	Pentti Juhani Eromaki	4447-67437-01	7665

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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/728,084

**Applicant(s)**

EROMAKI, PENTTI JUHANI

**Examiner**

Steven D. Maki

**Art Unit**

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application.                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 16 recite "wherein the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube". This appears to be a process step such as to render the scope of the claimed combination indefinite. Furthermore, the claimed association of the tire *and* studs *and* installation tool in the claimed combination is ambiguous. The language of "the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube" indicates that the **studs have been installed / are in the process of being installed** in the tread. For example, the stud 20 in applicant's figure 16D is being held by plunger pin 11 and appears to be *maintained* in the predetermined constant position by material of the tread 41. However, claims 1 and 16 also describe "combination for installing anti-slip studs" (emphasis added). This description indicates that the **studs are to be installed** in the tread (studs are separate from both the tread of the tire and the tool). The claimed location of the studs in claims 1 and 16 is unclear.

In view of the addition of the same wherein clause of "wherein the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube" to both claims 1 and 16, it is unclear why claim 1, but not claim 16, was amended to recite --the bottom flange being deeper ... when the stud is installed in said tread--

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and --said jaw fingers capable of being in contact--. This is especially true since applicant states that claim 16 has been amended in the same manner as discussed for claim 1 and applicant comments that claims 1 and 16 recite "jaw fingers capable of being in contact ...". See pages 13 and 14 of response filed 8-18-06.

Claims 1, 16, 38 and 39 recite "without the need for a stud injection tube". One of ordinary skill in the art is not reasonably apprised of the scope of protection afforded by this language. The meets and bounds of "the need" is unclear. What determines and/or defines the need? It is unclear, for example, if this language excludes a tube for feeding the stud to the fingers and/or a tube for insertion into the hole in the tread.

3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4) Claims 1-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 1, 16, 38 and 41, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is "wherein the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube" (claims 1,

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16) and "wherein the hard cermet piece of the studs is oriented into and maintained in the predetermined position without the need for a stud injection tube" (claims 38, 39).

There is no explicit support for this negative limitation in the original disclosure.

Moreover, there is insufficient information in the original disclosure to conclude that the anti-slip stud is maintained in position "without the need" for a stud injection tube. In particular, the original disclosure describes feeding an anti-slip stud 20 by means of a plunger (page 19). Figures 16A-16D illustrate the stud being fed from a location above the top point 15 of the jaw fingers 3, 4, 5, 6 (figure 16A) to a location in the hole in the tread (figure 16D). This feeding arrangement shown in figures 16A to 16D of the original disclosure is substantially the same as that shown in figures 3-5 of Petterson.

In figures 3-5, Petterson shows guiding the plunger 22 and a stud using a sleeve 25.

However, the original disclosure fails to illustrate and/or describe what tool structure is used to feed the stud to the location illustrated in figure 16A. The original disclosure also fails to illustrate and/or describe what tool structure is used to guide the plunger 11 shown in figures 16A and 16D. Since the specification is silent as to tool structure used to feed the studs to the fingers and/or guide the plunger, it would be speculation to conclude that a tube is not used to feed the studs to the fingers and/or guide the plunger so as to support the negative limitation of "maintained in the predetermined constant position without the need for a stud injection tube" (claims 1, 16, 38, 39).

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6) Claims 1-6, 8-22 and 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson (US 3,385,742) in view of at least one of Ostrovskis (US 2002/0050312) and Russia (RU 2,152,318).**

Pettersson, Ostrovskis and Russia are applied as in paragraph 5 of the last office action dated 5-17-06 (paragraph 5 of the last office action dated 5-17-06 is incorporated herein by reference).

With respect to "wherein the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube" (claims 1, 16) and "wherein the hard cermet piece of the studs is oriented into and maintained in the predetermined position without the need for a stud injection tube" (claims 38, 39), Pettersson states "...positioning a spike [stud] between the fingers and within the hole. Finally, the fingers are withdrawn from the hole, permitting the wall of the hole to contract to its original shape and thereby firmly grip the spike to safely anchor the same in a correct position". Hence, Pettersson teaches positioning the stud using the fingers and maintaining the position of the stud using material of the tread. Since only material of the tread is used to maintain the position of the stud in the tire, there is "no need for a stud injection tube". As noted in the last office action, Ostrovskis and/or Russia motivate one of ordinary skill in the art to use "non-round" tire studs in Pettersson's process for installing studs in premade holes in a tread; Ostrovskis suggesting the use of non-round studs to improve braking and traction of the tire and to prevent tilting of the stud to reduce heating and aging of tread rubber. As to claims 1, 16, 38 and 39, it would have been obvious to one

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of ordinary skill in the art to use the non-round studs in Pettersson's installation tool such that "the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube" (claims 1, 16) and "the hard cermet piece of the studs is oriented into and maintained in the predetermined position without the need for a stud injection tube" (claims 38, 39) since (1) Pettersson teaches positioning the stud using the fingers as shown in figures 3-5 and (2) Pettersson teaches that the spike head (bottom flange of the stud) slides along the fingers into its bottom position whereat the hole in the tread is permitted to contract to its original shape to thereby firmly grip the stud to safely anchor the same in a correct position.

Applicant argues that Pettersson, Ostrovskis and Russia do not suggest orienting studs or stud components into a predetermined position by jaw fingers without the need for a stud injection tube. This argument is not persuasive. First: Note the 112 first and second paragraph rejections in this office action. Second: During the use of Pettersson's installation tool, the fingers, but not a "stud injection tube", is inserted to the hole in the tread so that the stud slides along the fingers to the correct position; the fingers thereby maintaining the position of the stud "without the need for a stud injection tube". Third: After insertion, the stud is maintained in position by material of the tread instead of a "stud injection tube". Fourth: Claims 1 and 16 fail to require changing the orientation of the studs. Fifth: The fingers in Pettersson orient the stud since Pettersson teaches sliding the stud along the fingers to the correct position.

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7) **Claims 7-8 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson in view of at least one of Ostrovskis and Russia as applied above and further in view of Eromaki (US 6374886).**

Eromaki is applied as in paragraph 6 of the last office action dated 5-17-06 (paragraph 6 of the last office action dated 5-17-06 is incorporated herein by reference).

8) **Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson in view of at least one of Ostrovskis and Russia as applied above and further in view of Finland 9/65 or Japan 407 (JP 56-146407).**

Finland 9/65 and Japan 407 are applied as in paragraph 7 of the last office action dated 5-17-06 (paragraph 7 of the last office action dated 5-17-06 is incorporated herein by reference).

#### Remarks

9) Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 8-18-06 have been fully considered but they are not persuasive. Applicant's arguments are addressed above.

10) No claim is allowed.

11) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
October 26, 2006

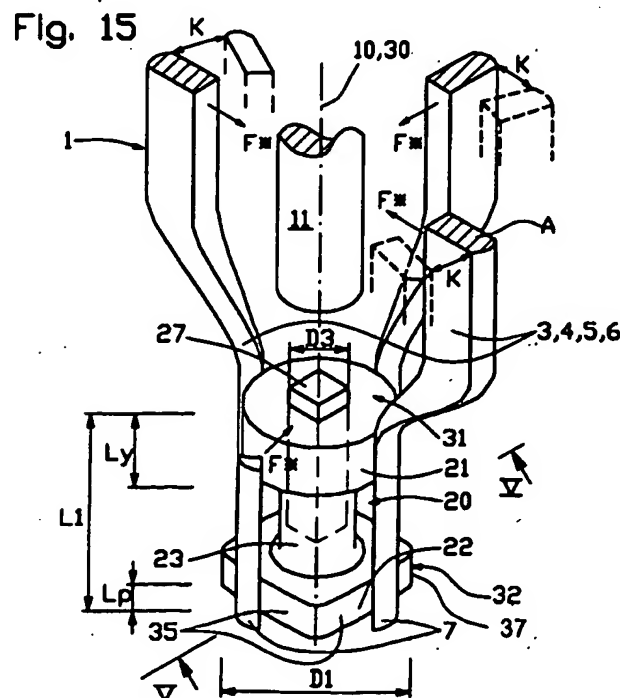
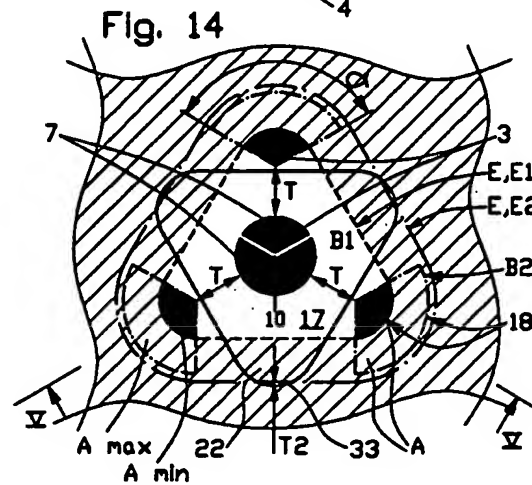
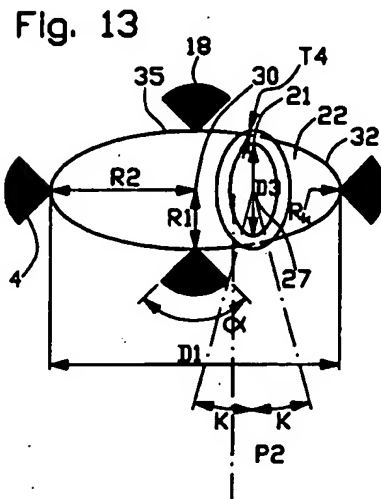
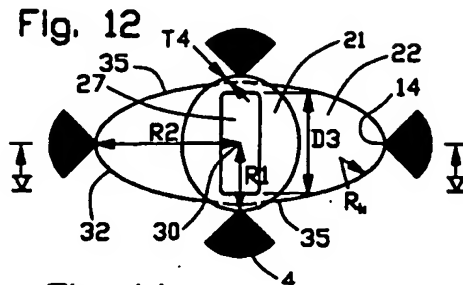
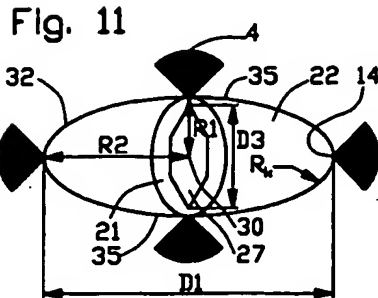
  
STEVEN D. MAKI 10-26-06  
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Our Ref. No. 4447-67437  
Inventor Name: Pentti Juhani Eromäki  
For: INSTALLATION OF NON-ROUND ANTI-SLIP  
STUDS IN A VEHICLE TIRE  
U.S. Patent Application No. 10/728,084  
Filed: 12/3/2003

# REPLACEMENT SHEET



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accepted  
Jm  
10-26-06

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